Store at –20°C

#2456

PSMA3 Antibody

☑ 100 µl
(10 western blots)

Cell Signaling TECHNOLOGY®

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Swiss-Prot Acc. #P25788

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R, Mk	28 kDa	Rabbit**

Storage: Supplied in 10mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C.
Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:
Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

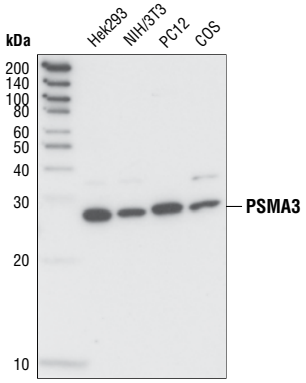
Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background: The 20S proteasome is the major proteolytic enzyme complex involved in intracellular protein degradation. It consists of four stacked rings, each with 7 distinct subunits. The two outer layers are identical rings composed of α subunits (called PSMAs), and the two inner layers are identical rings composed of β subunits. While the catalytic sites are located on the β rings (1–3), the α subunits are important for assembly and as binding sites for regulatory proteins (4). Seven different α and 10 different β proteasome genes have been identified in mammals (5).

PA700, PA28 and PA200 are three major protein complexes that function as activators of the 20S proteasome. PA700 binds polyubiquitin with high affinity and associates with the 20S proteasome to form the 26S proteasome which preferentially degrades polyubiquitinylated proteins (1–3). The proteasome has a broad substrate spectrum which includes cell cycle regulators, signaling molecules, tumor suppressors and transcription factors. By controlling the degradation of these intracellular proteins, the proteasome functions in cell cycle regulation, cancer development, immune response, protein folding and disease progression (6–9).

Specificity/Sensitivity: PSMA3 Antibody detects endogenous levels of total PSMA3 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val228 of human PSMA3 protein. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from various cell lines using PMSA3 Antibody.

Background References:

(1) Dahlmann, B. (2005) *Essays Biochem.* 41, 31–48.

(2) Pickart, C.M. and Cohen, R.E. (2004) *Nat. Rev. Mol. Cell Biol.* 5, 177–187.

(3) Nandi, D. et al. (2006) *J. Biosci.* 31, 137–155.

(4) Lupas, A. et al. (1993) *Enzyme Protein* 47, 252–273.

(5) Monaco, J.J. and Nandi, D. (1995) *Annu Rev Genet* 29, 729–754.

(6) Murray, A.W. (2004) *Cell* 116, 221–234.

(7) Ciechanover, A. (2006) *Proc. Am. Thorac. Soc.* 3, 21–31.

(8) Wang, J. and Maldonado, M.A. (2006) *Cell. Mol. Immunol.* 3, 255–261.

(9) Rubinsztein, D.C. (2006) *Nature* 443, 780–786.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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